

ABSTRACT OF THE INVENTION

A light-emitting device and a method for manufacturing the same are described, by forming a $\text{SiN}/\text{Al}_{1-x-y}\text{In}_x\text{Ga}_y\text{N}$ ($0 \leq x \leq 1$, $0 \leq y \leq 1$, $x+y \leq 1$) superlattice layer
5 between a substrate and an undoped GaN as a buffer layer, so as to reduce dislocation density of the buffer layer. In the $\text{SiN}/\text{Al}_{1-x-y}\text{In}_x\text{Ga}_y\text{N}$ ($0 \leq x \leq 1$, $0 \leq y \leq 1$, $x+y \leq 1$) superlattice layer, $\text{Al}_{1-x-y}\text{In}_x\text{Ga}_y\text{N}$ ($0 \leq x \leq 1$, $0 \leq y \leq 1$, $x+y \leq 1$) can be n-type, p-type or undoped.